

A) a polypeptide comprising all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P; and

B) a polypeptide that is at least about 90% homologous to the amino acid sequence set forth in A).

Please add the following new claims 42 through 138:

42. The nucleic acid molecule of claim 41, wherein the amino acid sequence of said polypeptide is at least about 90% homologous to the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F O E D E

wherein (U) is M or nothing and (X) is R.

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43. The nucleic acid molecule of claim 41, wherein the amino acid sequence of said polypeptide is at least about 95% homologous to the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y I Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R.

44. The nucleic acid molecule of claim 42, wherein (U) is nothing.

45. The nucleic acid molecule of claim 42, wherein (U) is M.

T2
Cont.
46. The nucleic acid molecule of claim 41, wherein said polypeptide comprises all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

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47. The nucleic acid molecule of claim 46, wherein (X) is R.

48. The nucleic acid molecule of claim 46, wherein said polypeptide comprises the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

49. The nucleic acid molecule of claim 48, wherein (X) is R.

50. The nucleic acid molecule of claim 49, wherein (U) is M.

51. The nucleic acid molecule of claim 49, wherein (U) is nothing.

52. The nucleic acid molecule of claim 49, wherein said polypeptide consists of the following amino acid sequence:

I2
Cont

(U) R P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

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wherein (U) is M or nothing.

53. The nucleic acid molecule of claim 52, wherein (U) is M.

54. A recombinant host cell of claim 23, wherein said polypeptide is selected from the group consisting of:

A) a polypeptide comprising all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P; and

B) a polypeptide that is at least about 90% homologous to the amino acid sequence set forth in A).

I²
Cont.
55. The recombinant host cell of claim 54, wherein the amino acid sequence of said polypeptide is at least about 90% homologous to the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E

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G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R.

56. The recombinant host cell of claim 54, wherein the amino acid sequence of said polypeptide is at least about 95% homologous to the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R.

57. The recombinant host cell of claim 55, wherein said host cell is not capable of glycosylation or is a non-human host cell.

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Cont.

58. The recombinant host cell of claim 57, wherein said host cell is selected from a yeast cell, a mouse Ltk⁻ cell, and a Chinese hamster ovary cell.

59. The recombinant host cell of claim 57, wherein said host cell is a prokaryotic cell.

60. The recombinant host cell of claim 59, wherein said host cell is *E. coli*.

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61. The recombinant host cell of claim 57, wherein said host cell is a eukaryotic cell.

62. The recombinant host cell of claim 61, wherein said host cell is a mammalian cell.

63. The recombinant host cell of claim 61, wherein said host cell is a Chinese hamster ovary cell.

64. The recombinant host cell of claim 55, wherein said host cell produces glycosylated IL-1i.

65. The recombinant host cell of claim 55, wherein said host cell produces nonglycosylated IL-1i.

I2
cont.
66. The recombinant host cell of claim 55, wherein (U) is nothing.

67. The recombinant host cell of claim 55, wherein (U) is M.

68. The recombinant host cell of claim 54, wherein said polypeptide comprises all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R E A F I R S D S G P T T S F

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E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

69. The recombinant host cell of claim 68, wherein (X) is R.

70. The recombinant host cell of claim 68, wherein said polypeptide comprises the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S E
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

I²
Cont.

71. The recombinant host cell of claim 70, wherein (X) is R.

72. The recombinant host cell of claim 71, wherein (U) is M.

73. The recombinant host cell of claim 71, wherein (U) is nothing.

74. The recombinant host cell of claim 71, wherein said host cell is not capable of glycosylation or is a non-human host cell.

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75. The recombinant host cell of claim 74, wherein said host cell is selected from a yeast cell, a mouse Ltk⁻ cell, and a Chinese hamster ovary cell.

76. The recombinant host cell of claim 74, wherein said host cell is a prokaryotic cell.

77. The recombinant host cell of claim 76, wherein said host cell is *E. coli*.

78. The recombinant host cell of claim 74, wherein said host cell is a eukaryotic cell.

79. The recombinant host cell of claim 78, wherein said host cell is a mammalian cell.

80. The recombinant host cell of claim 78, wherein said host cell is a Chinese hamster ovary cell.

I2
cont.
81. The recombinant host cell of claim 71, wherein said host cell produces glycosylated IL-1i.

82. The recombinant host cell of claim 71, wherein said host cell produces nonglycosylated IL-1i.

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83. The recombinant host cell of claim 71, wherein said DNA molecule comprises a heterologous promoter operatively linked to said nucleic acid sequence encoding said IL-1*i* polypeptide.

84. The recombinant host cell of claim 71, wherein said nucleic acid sequence encoding said IL-1*i* polypeptide further comprises a sequence encoding an N-terminal secretion leader sequence.

85. The recombinant host cell of claim 84, wherein the leader sequence comprises all or part of the following amino acid sequence:

M E I C R G L R S H L I T L L L F L F H S E T I C.

86. The recombinant host cell of claim 71, wherein said polypeptide consists of the following amino acid sequence:

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Cont.
(U) R P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing.

87. The recombinant host cell of claim 86, wherein (U) is M.

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88. The recombinant host cell of claim 87, wherein said host cell produces nonglycosylated IL-1i.
89. The recombinant host cell of claim 88, wherein said host cell is *E. coli*.
90. The recombinant host cell of claim 86, wherein said host cell is a Chinese hamster ovary host cell.
91. The recombinant host cell of claim 86, wherein said host cell is a eukaryotic host cell.
92. The recombinant host cell of claim 86, wherein said host cell produces glycosylated IL-1i.
93. The recombinant host cell of claim 86, wherein said host cell is a mammalian host cell.
94. The recombinant host cell of claim 86, wherein said host cell is a prokaryotic host cell.
95. A process of claim 25, wherein said recombinant polypeptide is selected from the group consisting of:
- A) a polypeptide comprising all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N

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N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P; and

B) a polypeptide that is at least about 90% homologous to the amino acid sequence set forth in A).

96. The process of claim 95, wherein the amino acid sequence of said recombinant polypeptide is at least about 90% homologous to the following amino acid sequence:

I2
cont.

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R.

97. The process of claim 95, wherein the amino acid sequence of said recombinant polypeptide is at least about 95% homologous to the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P T E P H A

L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R.

98. The process of claim 96, wherein said host cell is not capable of glycosylation or is a non-human host cell.

99. The process of claim 98, wherein said host cell is selected from a yeast cell, a mouse Ltk⁻ cell, and a Chinese hamster ovary cell.

100. The process of claim 98, wherein said host cell is a prokaryotic cell.

101. The process of claim 100, wherein said host cell is *E. coli*.

102. The process of claim 98, wherein said host cell is a eukaryotic cell.

103. The process of claim 102, wherein said host cell is a mammalian cell.

104. The process of claim 102, wherein said host cell is a Chinese hamster ovary cell.

105. The process of claim 96, wherein said recombinant polypeptide is glycosylated.

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cont:

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106. The process of claim 96, wherein said recombinant polypeptide is nonglycosylated.

107. The process of claim 96, wherein (U) is nothing.

108. The process of claim 96, wherein (U) is M.

109. The process of claim 95, wherein said recombinant polypeptide comprises all or an IL-1 inhibitory fragment of the amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

110. The process of claim 109, wherein (X) is R.

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111. The process of claim 110, wherein said recombinant polypeptide inhibits IL-1 induced PGE₂ production.

112. The process of claim 109, wherein said recombinant polypeptide comprises the following amino acid sequence:

(U) (X) P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y I Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing and (X) is R or P.

113. The process of claim 112, wherein (X) is R.

114. The process of claim 113, wherein (U) is M.

115. The process of claim 113, wherein (U) is nothing.

116. The process of claim 113, wherein said host cell is not capable of glycosylation or is a non-human host cell.

117. The process of claim 116, wherein said host cell is selected from a yeast cell, a mouse Ltk⁻ cell, and a Chinese hamster ovary cell.

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118. The process of claim 116, wherein said host cell is a prokaryotic cell.
 119. The process of claim 118, wherein said host cell is *E. coli*.
 120. The process of claim 116, wherein said host cell is a eukaryotic cell.
 121. The process of claim 120, wherein said host cell is a mammalian cell.
 122. The process of claim 120, wherein said host cell is a Chinese hamster ovary cell.
 123. The process of claim 113, wherein said recombinant polypeptide is glycosylated.
 124. The process of claim 113, wherein said recombinant polypeptide is nonglycosylated.
 125. The process of claim 113, wherein said DNA molecule comprises a heterologous promoter operatively linked to said nucleic acid sequence encoding said IL-1i polypeptide.
 126. The process of claim 113, wherein said nucleic acid sequence encoding said IL-1i polypeptide further comprises a sequence encoding an N-terminal secretion leader sequence.

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127. The process of claim 126, wherein the leader sequence comprises all or part of the following amino acid sequence:

MEICRGLRSHLITLLLFLFHSETIC.

128. The process of claim 113, wherein said recombinant polypeptide consists of the following amino acid sequence:

(U) R P S G R K S S K M Q A F R I W D V N Q K T F Y L R N
N Q L V A G Y L Q G P N V N L E E K I D V V P I E P H A
L F L G I H G G K M C L S C V K S G D E T R L Q L E A V
N I T D L S E N R K Q D K R F A F I R S D S G P T T S F
E S A A C P G W F L C T A M E A D Q P V S L T N M P D E
G V M V T K F Y F Q E D E

wherein (U) is M or nothing.

I²
Cont
129. The process of claim 128, wherein (U) is M.

130. The process of claim 129, wherein said recombinant polypeptide is nonglycosylated.

131. The process of claim 130, wherein said host cell is *E. coli*.

132. The process of claim 128, wherein said host cell is a Chinese hamster ovary host cell.

133. The process of claim 128, wherein said host cell is a eukaryotic host cell.

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134. The process of claim 128, wherein said recombinant polypeptide is glycosylated.

135. The process of claim 128, wherein said host cell is a mammalian host cell.

136. The process of claim 128, wherein said host cell is a prokaryotic host cell.

137. The nucleic acid molecule of claim 49, wherein said nucleic acid sequence encoding said IL-1*i* polypeptide further comprises a sequence encoding an N-terminal secretion leader sequence.

*I2
Cont*
138. The nucleic acid molecule of claim 137, wherein the leader sequence comprises all or part of the following amino acid sequence:

M E I C R G L R S H L I T L L L F L F H S E T I C.

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